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| **Halifax County Schools Elementary School Lesson Plan** | | | | | | | | | |
| Subject: MATH | **Teacher:** | | | | **Grade Level: First Grade** | | **Date(s): September 12-16, 2016** | | |
| **Content :**  Common Core Standards & Essential Standards | **1.NBT.1** Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.  **1.NBT.2** Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases:  **a.** 10 can be thought of as a bundle of ten ones – called a “ten.” | | | | | **Can Statements /Learning Targets** (I can……..)   * I can count, read, and write to 120. * I can show quantity with numbers. * I know that a bundle of ten one s is called a ten. * I can identify how many ones are in a 2-digit number. | | | |
| Essential Question(s): (What question(s) should students be able to answer at the end of the lesson/unit?) | Why is there a sequence in counting?  What are different ways to count?  In what ways can items be grouped?  How can I compare numbers?  I know that a bundle of ten ones is called a ten. | | | | | **Standard for Mathematical Practice:**  **1. Make sense and preserve in solving problems.**  2. Reasons abstractly and quantitatively.  **3. Constructs viable arguments and critiques the reasoning of others.**  **4. Models with mathematics.**  **5. Use appropriate tools strategically.**  **6. Attend to precision.**  7. Looks for and makes use of structure.  8. Looks for and expresses regularity in repeated reasoning. | | | |
| **Technology Connection:**  <http://www.ixl.com/math/grade-1/counting-up-to-100>  [www.starfall.com](http://www.starfall.com)  <http://www.abcya.com/interactive_100_number_chart.htm>  [www.tenmarks.com](http://www.tenmarks.com) | | | |
| **Vocabulary:**  Academic/Content | Counting by tens, counting ones, arrange, count, group, represent, number, number line, ten frames, tens, ones, digit whole hundred, counting up, compare, more than, less than, 100s board, set, group, counting all, counting, counting on decade number, place value, left over | | | | | **Literature Connection:**  Every Buddy Counts by Stuart J. Murphy  Ten, Nine, Eight by Molly Bang  Fish Eyes: A Book You Can Count On by Lois Ehlert  Feast for 10 by Cathryn Falwell  100 Days of Cool by Stuart Murphy | | | |
| **Materials Needed:** | (Math Centers should be fully implemented in the third week of instructional delivery.)   * Unifix cubes (students need to “snap together” tens today) * Cardstock- “*Place Value Mat”, “Sentence Frame”* * *“How Many Pockets in Our Class - Journal Prompt”*, “*How many Crayons Are in the Box?”* * Chart Paper * Boxes/bags of crayons * Rubber bands (activity 3) * Unifix cubes (students need to build groups of tens today) * MathBoard materials and markers * *Activities-“Thinking About-Items in Our Classroom”, “Ten Frame Record Slips” “Counting Groups”* * Small objects for counting and sorting (ex. Pennies, counters, cotton balls, beans, pasta, etc.) * Cardstock-*“ Sentence Frames”, “Place Value Mat”*  (from previous day) * Dice * Cardstock- *“Number Cards”*   *Note: Each set includes 20-50, mix up the set and give each group 5-10 numbers within the range, but not all. (Station One)*   * Math journal or mathboards * *“How Many Ways - Journal Prompt”* * Cardstock-*“ Sentence Frames”* | | | | |  | | | |
| **Center Rotation Activities**  **(Teacher will model routines for center rotations. Full center rotations will begin in the third week of school.)** | **Math with Teacher**  Teacher/TA works with guided math group on skill(s) for the week. | **Math Fluency**  Students will read books about math. Choose from the list above or use books connected to the review skills for the week. | | | | **Technology**  [**http://www.ixl.com/math/grade-1/counting-on-the-hundred-chart**](http://www.ixl.com/math/grade-1/counting-on-the-hundred-chart)  This is an online game allows students to fill in the missing numbers in the hundred’s chart.  [**http://www.ixl.com/math/grade-1/hundred-chart**](http://www.ixl.com/math/grade-1/hundred-chart)  This is an online game allows students to use the hundred’s chart to count one more or one less. | | | **Writing About Math**  Teacher Choice |
| **Monday**  **Subject Integration:** | **Whole Group** Alignment Lesson: How Many Pockets? *Unpacking Document 1.NBT.2a-c. As children build this understanding of grouping, they move through several stages: Counting by ones; Counting by groups and singles; and Counting by tens and ones. Because children begin their development with counting by ones, we cannot impose grouping by ten. They need to experiment with showing amounts in groups and come to an agreement that ten is a useful size to use.*  ***Activity One: How Many Shoes in Our Class?***  ***Teacher Note: The focus of this lesson is for students to begin to thinking about different ways to count larger groups of objects (specifically by groups of 10).***  Gather students. Remind students that often in math we use the strategy of counting to answer math questions, especially those questions that ask how many.  1. Pose the question*, “How can we count how many shoes are in our classroom in some way that is quicker than counting by ones?* Discuss possible options and try a few.  2. Suggest counting by tens. What do you notice?  3. Have students take off their shoes and together practice arranging the shoes into groups of ten and practice counting.  4. Together determine the number of tens and ones. Use the sentence frame included to describe the results.  ***Activity Two: How Many Pockets in Our Class?***  Now, using the work we just did with shoes, we want to answer the question, how many pockets are in our class.  1. *Ask students how many pockets they think they are wearing?* Allow time for students to think and then ask them for estimates. Discuss how they could figure it out.  2. Give students tubs of cubes. Ask students to place one cube in each of their pockets (***teacher does the same).*** Place all the extras in the tub.  3. Regather students. The teacher takes all the cubes from her pockets and places them in front of her. Together answer the question how many pockets the teacher is wearing. *How did we count?* We used the counting strategy of counting by ones.  4. Snap all the cubes together and count again*. How did we count? What strategy did we use? Did we count them all at once or one at a time? Did the total change?*  5. Ask students to take all of the cubes out their pockets and place them in front of them. Have each student count the number of cubes that they have and then represent that number on their fingers. *How many pockets do you have?* Discuss a few answers and the strategies students used.  6. Ask students *what we could do if we wanted to find out how many pockets were at our table?* Give students 2-3 minutes to return to their table and work together to figure out how many pockets are at their table (watch for a variety of answers/methods: who snaps them into one group; who takes them all apart: who organizes them into groups of ten?, etc.).  Have students discuss how they figured out the answer to the question. *What strategies did they use? Ask students what would happen if they organized their cubes into groups of ten? Would that make sense? Do they have enough cubes to make groups of ten? Did their total change?*  8. Give students 2-3 minutes to rearrange and count their cubes. Listen for students’ use of counting by tens.  9. Have groups bring their representations back to the carpet. Have the groups explain how they counted their groups. Together as a class practice counting by tens for each group. ***Teacher Note: while counting, model how to use the place value mat to organize the tens and ones***  10. As each group models and counts answer we have \_\_tens and \_\_\_ones which is \_\_ pockets.  ***Teacher Note: See large sentence frame attached.***  As you model using the place value mat, discuss how tens groups were made (and snapped together) and why there were leftover ones. Continue practicing with each group, teacher modeling and counting out loud.  11. Now, how could we figure out how many pockets are in the entire class? Have one student from each group bring their cubes to the middle of the group. Have them sort their tens onto the tens side and the leftovers/ones on the ones side.  12. Together as a class, look at the amount of cubes on the ones side. *How many cubes can go on this side? Do we have enough to make more groups of ten? How do you know?*  13. Together as a class work to make more groups of ten. Afterwards practice counting. *Would it make sense to count by ones? Is there another strategy we could use?* Try as a group to count by tens. As a class answer the question How Many Pockets Are in Our Class? (use the sentence frame from step 10).  ***Activity Three: Representing the Pockets***  ***Materials Note: Journal Prompt for Pockets needed here.***  Tell students that know that we have done all of this work representing the number of pockets with cubes we want to record this information so we can remember how we organized our cubes into tens and ones. This will be an anchor chart that we can refer to.  1. Tell students that when we represent tens and ones we represent the groups of tens on one side and the group of ones on the other side. Then we can count tens and ones.  2. Distribute activity, “*“How Many Pockets in Our Class - Journal Prompt”*. Show students the prompt at the top. Have them fill in sentence frame with the number of groups of ten and ones. They can then work by themselves or with a partner to represent the total with a drawing.  3. Give students 5-7 minutes to represent the total. Observe how students are representing the total. Look for different representations including: drawing ten squares for each tower; drawing a “stick” for each group of ten, etc. As students work, discuss with them how/why they are representing the group in that manner.  4. Regather the students and discuss the different representations. Make sure that everyone agrees on the number of tens and ones. If desired hang the different representations on a piece of chart paper (with the question and the sentence frame at the top) to create an anchor chart to refer to for the next two days. It may also be helpful to add the counting strategies the students used (we counted by tens; we counted the ones by ones, etc.)  ***Activity Four: How Many Crayons?***  ***Teacher Note: Give each pair of students a place value mat; sentence frames, a set of crayons; some rubber bands; Journal Prompt.***  1. Tell students that now they are going to count /represent the number of crayons in a box using the same work they just did. They will need to count the crayons, organize them into groups of ten and left over ones.  ***Teacher Note: If desired, show students how to create groups of ten with the crayons by using the rubber bands. You can also let them discover how to group on their own.***  2. Give students 10 minutes to represent and record. Collect as an assessment if desired.  ***Activity Five: Review and Close***  1. If time permits, have students come back together and share how they represented the crayons in their bag/box. Practice counting by ones and tens. Review the anchor chart made in activity three to review how to represent large groups of objects by using groups of ten. | | | **Independent Work** | | | | **Assessment (formative/summative)**  Use a journal prompts from Part 2 as an evaluation of student’s ability to group objects into tens and ones. | |
| **Tuesday**  **Subject Integration:** | **Whole Group** Lesson: Place Value Stations *Teacher Note: The focus of the stations in this lesson are on building teen numbers with a group of ten and some extra ones. This will give students an understanding for future lessons.*  ***Activity 1: Using the 10x10 grid***  1. Have children turn to the 10x10 grid on their MathBoard. Instruct children to draw a circle in each box in the first column of the 10x10 grid.  2. Ask students to count the circles (10) and write the number 10 under the first group of circles. Ask, “What does 10 mean?” Answer: 10 means 1 group of ten with zero ones left over.  3. Draw a line under the “1” to show that there is 1 group of ten in the number 10.  4. Continue naming and recording the tens groups to 100, asking the same questions. Name and write the new total each time, underlining the first digit to show how many groups of ten are in the new decade number.  ***Activity 2: How Many Tens?***  1. Point to each number on the 10x10 grid in sequence. Have children respond by saying the number and telling how many tens it has. Then you say the number of tens and have the children tell you the number it represents.  2. Next, write several decade numbers in random order on the board and have the children say each number and tell how many tens it has. Example: 60 is 6 tens.  ***Activity 3: Place Value Stations/Centers***  *Teacher Note: You may choose to introduce and model these stations one at a time and allow students to practice or you may introduce all 3 and allow students to work at 3 different stations and rotate.*  Station 1- Thinking About Items in Our Classroom  Station 2- Teen Numbers  Station 3- Counting Groups  *Refer to* ***Teacher Guide (next page)*** *for detailed directions and materials for each station.* **Lesson Continued: Place Value Stations** ***Activity 3 Continued: Place Value Stations- Teacher Guide***  ***Teacher Note:*** *As students work on representing numbers you may want to take photographs to create an anchor chart to add to previous day’s work or you may want to display them on the SMART board for students to review after their work is complete. To promote math talk, students can also describe what they did and have other students add-on, etc. to discuss what each pair did.*  ***Thinking About Items in Our Classroom***  ***Materials:*** Journal Prompt, bags or tubs of a large quantity items that could be counted.  *Teacher Note: Vary the quantity of items based on the needs of your students.*  ***Directions:*** Students will choose a bag or tub of items. Count the items and draw a representation of them in tens and ones. Students will also answer the questions at the top of the recording sheet.  ***Teen Numbers***  ***Materials:*** 10 individual ten frames record slips for placing groups of ten, ten plastic zip bags with 10-19 of the same small objects in each bag-label each bag with letters and A-J (ex: Bag Labeled A, contains10 beans, Bag Labeled B contains 11 buttons, Bag Labeled C contains12 pennies, Bag Labeled D contains13 triangles, etc. continue to 19). *\*\*Objects must fit in a ten frame. You may choose to laminate the record slips and use dry erase markers for recording so they can be reused.*  ***Directions:*** Partners or small groups count the objects in bag (one at a time), placing a group of ten on the ten frame and the leftovers/ones beside the ten frame to the right. Students count and write the number of objects. They then use math talk and state, “One group of ten and \_\_\_ leftovers/ones.” *You may want to write this statement on a large card and use as a math talk card.* Once all bags have been counted, students place the slips in order from 10-19.  ***Counting Groups***  ***Teacher Note:*** *Use sentence frames from Day 41 for this station. Use this station as an assessment.*  ***Materials:*** 6-8 plastic zip bags labeled with a letter (A-H) with 10-20 of the same small objects in each bag (buttons, beans, noodles, cotton balls, pennies, etc), Blackline master record sheet “Counting Groups”  ***Directions:*** Individuals select a bag; count the objects by placing groups of ten in the tens frame and the leftovers/ones beside the tens frame. They then use math talk and state, “There are \_\_\_\_ groups of ten and \_\_\_leftovers/ones.” Students record the information on the recording sheet. Repeat with the other bags. *\*\*Objects must fit in a ten frame. You may choose to laminate the record slips and use dry erase markers for recording so they can be reused.*  ***Activity Four: Closure***  After students have worked with the stations have them come back together and choose a few students to describe/explain how they created a number using tens and ones.  ***Differentiation:***   1. For students who are struggling with counting or higher numbers, have them work with numbers to 20. 2. These stations need to be repeated ***many*** times. After children repeat these many times, you can switch out loose objects for towers of ten cubes and single cubes and/or base ten blocks. You must have a conversation to see if they understand these mean the same. If it confuses them, they are not ready for this step. Remember the stages each child must go through and they will do this at different rates. You may have some ready to work with towers of ten cubes and base ten blocks and some who will still need access to loose objects that they count by ones and group into tens. 3. Create a book *Items in Our Classroom.* The book will need several blank pages – Journal Prompt pages. Partners can work together to complete a page. Example: We have 46 pencils in our pencil buckets. This is 4 groups of ten and 6 leftovers/ones. They draw a picture to represent the groups of tens and leftovers/ones.   ***Place Value Chart:*** You may want to create a Place Value chart/poster. It may include the following terms and pictures or real items:   * Groups of ten – draw picture of ten frame and ten stick tower with 10 cubes * Leftovers/ones – draw a picture of single cubes and/or circles * Place value mat – draw example of a mat like they use in stations * Expanded form – draw a picture of 2 towers of ten cubes and 5 leftovers/ones and write 20 + 5 * Tens and ones – draw 4 tens sticks (straight lines) and 3 dots or circles to the right of the ten sticks   *\*\* Only add terms to the chart as children are introduced to them.* | | | **Independent Work** | | | | **Assessment (formative/summative)**  Station 3 Counting Groups can be used as an opportunity to assess student work. | |
| **Wednesday**  **Subject Integration:** | **Whole Group** **Lesson: Representing Two-Digit Numbers** *A student’s ability to conserve number is an important aspect of this standard. It is not obvious to young children that 42 cubes is the same amount as 4 tens and 2 leftovers. It is also not obvious that 42 could also be composed of 2 groups of ten and 22 leftovers. Therefore, first graders require ample time grouping proportional objects (cubes, beans, ten frames) to make groups of ten, rather than using pre-grouped materials (base ten blocks). The focus of the lesson is on developing the understanding that “42” can be seen as 42 ones AND as 4 tens and 2 ones, etc. making them equivalent representations of the number.*  ***Activity One: Organizing Items For Counting***  *Teacher Note: The focus of today’s lesson is on working with groups from 20-50.*  1) Gather students. Tell them that they are going to work on representing numbers in a variety of ways. Begin with a group of 10 objects.  2) Show students 10 ones. Count together to answer the question, how many? Refer to the counting strategies anchor chart from Monday’s lesson.  3)Ask, *“What would happen if I snapped them together?” “How many cubes would I have?” “How would I know that/prove that?”*  4) What would happen if I had a bigger group of cubes? How could I count those? Is there another counting strategy you could use? Remind students about counting by tens. Snap together the group of 37 into 3 ten sticks and 7 ones. Ask, *“How many tens? How many leftovers/ones? What is the number?” How did we count the group? Could I also count it as 37 ones?*  5) Repeat with a larger quantity.  6) If your students are ready, practice using pre-made sticks and organizing them on the place value mat. Do **not** change the total number. Ask what other ways the cubes can be grouped with tens and leftovers/ones.  ***Activity Two: Place Value Stations***  Tell students that now they are going to use their knowledge to represent numbers with their partners. Model before having students to try. *Planning Note: Depending on your class, students can either participate in one station at a time or they groups can work in all three stations simultaneously and then switch after 10-15 minutes.*  ***Station One: Build My Number***  *Teacher Note: Number Cards (see note in Materials List), Whiteboards, Markers, Unifix Cubes, Place Value Mat)*  1) Give students the necessary materials. Place the numbers face down.  2) Student one turns over a number. They write the number on a white board and represents with a drawing.  3) Student two represents the same number using cubes and the place value mat. **Lesson: Representing Two-Digit Numbers** ***Activity Two: Place Value Stations (continued)***  4) Differentiation: Using the same number, change the groupings and record as many different ways as possible.  5) Repeat the process for other numbers. Students should switch roes each time.  6) Have students practice for 10-15 minutes.  ***Station Two: Trading Tens***  *Teacher Note: Dice, Unifix Cubes, Place Value Mat*  **Directions:** (Model this activity with the class before students play with partners).   1. Partner 1 rolls the dice, counts out that many cubes, places them on his place value mat, and states how many he rolled and how many tens and ones.   Example: *I rolled a 6 and I have 0 tens 6 ones*. ***When a student has collected 10 cubes, they trade for a ten stick.*** Example. *I had 6 and I rolled a 5. I traded 10 ones for a ten stick. Now I have one group of ten and 1 leftover which equals 11.*   1. Partner 2 repeats. Play until one partner reaches 50.   ***Differentiation:***   * Roll 2 dice and play to 100 instead of 50. * Use base ten blocks.   ***Station Three: Assessment: Equivalent Representations Journal Prompt***  1) Use the included journal prompt as an opportunity to assess student’s ability to represent a number using ten sticks and ones. Provide students with all the necessary materials (cubes, place value mats, etc.). Tell students that they can first represent the number with the cubes and then draw a picture or they can just draw a picture.  2) For additional information, after the students represent the number one way ask them if there are any other ways they could represent the number.  ***Activity Three: Review and Close***  *Teacher Note: As students work on representing numbers you may want to take photographs to create an anchor chart to add to Day 41’s work or you may want to display them on the SMART board for students to review after their work is complete. To promote math talk, students can also describe what they did and have other students add-on, etc. to discuss what each pair did.*  After students have worked on stations for 30 minutes, have them clean up and rejoin you on the carpet. Have one or two students share how they modeled one of their numbers. | | | **Independent Work** | | | | **Assessment (formative/summative)**  *“How Many Ways? –* Journal Prompt” | |
| **Thursday**  **Subject Integration:** | **Whole Group**  ***Lesson: How Many Tens?***  ***Teacher Note:*** *The focus of this lesson is on numbers greater than 50. Students are working to understand how many groups of ten are in numbers 10-100 (see standard).*  ***Activity 1: Review Counting Strategies***  ***Teacher Note:*** *Use the photographs from the previous days to review grouping by ten and different counting strategies.*   1. Reviewing the pictures from the previous days ask students to describe the work they have been doing. 2. What strategies have they been using to count*? How would you describe the number that you see in this photograph? How many groups of ten? Ones? Are there any other ways to build the number?*   ***Activity 2: Using the Number Path***  ***Teacher Note:*** *Reference Math Expressions Unit 4 Lesson 8, TE p. 350 if needed to introduce the number path.*   1. Show students a small number (ex: 26). *Ask them how many tens are in the number?* Tell students that the number path allows students to draw a picture to represent a number. 2. Have students write the number on their whiteboards. 3. Introduce the number path running along the top of the whiteboard. 4. Demonstrate how to draw a line through each group of ten and then add a dot for each additional one in the next group of ten (*Teacher note: If needed, draw student attention to how the number in the tens place matches the number of ten sticks)*. 5. Student can then draw a picture of ten sticks and ones beside the number that they wrote. They can then check that the number path matches the picture and the number. 6. Have students use the number path to represent a few more new numbers. Ask them to look at their picture on the number path. *How many ten sticks did they draw? Does it match the number? Does it match the drawing?*   ***Activity 3: A Handful of Cubes***  ***Teacher Note:*** *See Materials*  Tell students that now they are going to play a game and represent numbers on the number path as they fill in the number path.   1. Both partners take a handful of cubes, place them in one pile, and work to organize them into tens and ones (use a place value mat). 2. Partner 1 draws the matching picture on the number path. 3. Partner 2 then describes how many they have by using the included sentence frame. 4. Students then clear the board and switch jobs.   *Teacher Note: Once students are able to record small numbers, they can continue to add on to the number and practice reorganizing their growing set into tens and ones as they add on.*  *(Ex: 64+9=73, I had 6 groups of ten and 4 ones. I added 9 ones. Now I have 7 groups of 10 and 3 ones).*  Students work in pairs for 10-15 minutes. As students work, observe and note who is able to represent the tens and ones both with the cubes and with the number path.  ***Lesson: How Many Tens?***  ***Activity Four Continued: How Many Tens?***  ***Teacher Note:*** *For this activity use the green foam, or other, premade ten sticks and ones.*  Regather students and introduce the new activity. Tell students that they will be take groups of tens and ones to build a number. Introduce and model the work for the whole class and then have students work in pairs for 10-15 minutes.  ***Teacher note:*** *It will be important to review how to fill in the recording sheet as well as the included sentence frame below each number. Show students how each sentence frame refers to the number* ***above*** *If needed review how to use the blue make a ten cards****.***  ***Directions***  1) Partner 1: takes a blue make a ten card and counts out/creates that many premade ten sticks.  2) Partner 2: takes a ones card and counts out that many ones  3) Both partners put their cards together /overlap them to make the number.  4) Both students draw a picture of the number on their whiteboards using ten sticks and ones. They can then flip the blue make a ten cards over to see if their picture matches the number.  *Teacher Note: if desired, students can also continue to practice using the Number Path.*  5) Students can use the included sentence frames (on the recording sheet **or** those from Day 41) to practice talking about their number (53 has 5 groups of ten and 3 ones), etc.  6) Students then record their work on the included recording sheet by writing the number and drawing a picture of the tens and ones.  7) Afterwards students erase, switch jobs and repeat the process for additional numbers.  As students work, observe and note who is able to discuss the number of tens and ones in a given number and how they know. Take photographs, especially of larger numbers and add them to the anchor chart. Afterwards have a class discussion about how to represent numbers by using groups of ten and ones.  ***Activity Five: Close and Review***  As closure, have students share how they built each number and how they checked their work. You can use the pictures from your observations to further facilitate the math discussion. | | | **Independent Work** | | | | **Assessment (formative/summative)**  Observations  Assignment: Recording sheet in activity 4, representing numbers with ten sticks and ones | |
| **Friday**  **Subject Integration:** | **Whole Group**  Teacher will review skills and create assessment covering the skills taught during the week. | | | **Independent Work** | | | | **Assessment(formative/summative)**  **1.NBT.1**  Teacher will pull assessment materials from:  <http://commoncoretasks.ncdpi.wikispaces.net/home> | |
| **Reflection-Checking for Understanding**  Students who need enrichment:  Action/Activities**:** | | | **Reflection-Checking for Understanding**  Students who need enrichment:  Action/Activities**:** | | | | | **Reflection-Checking for Understanding**  Students who need enrichment:  Action/Activities**:** | |